UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/335,608	06/18/1999	TIMOTHY J. MOULSLEY	PHB-34-257	6666

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ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	09/335,608	MOULSLEY, TIMOTHY J.
	Examiner	Art Unit
	Soon D. Hyun	2616

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>25 July 2007</u>.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1,2,4-7,9,12-17,23,24,27,28 and 30</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1, 2, 4-7, 9, 12-17, 23, 24, 27 28 and 30</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

       1. ☐ Certified copies of the priority documents have been received.

       2. ☐ Certified copies of the priority documents have been received in Application No. _____.

       3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date. _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on

7/25/2007 has been entered.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent
> granted on an application for patent by another filed in the United States before the invention by the
> applicant for patent, except that an international application filed under the treaty defined in section
> 351(a) shall have the effects for purposes of this subsection of an application filed in the United States
> only if the international application designated the United States and was published under Article 21(2)
> of such treaty in the English language.

3.   Claims 1, 2, 4-7, 9, 15-17, 27, 28, and 30 are rejected under 35 U.S.C. 102(e) as

being anticipated by Hamalainen et al (U.S. Patent No. 6,477,176).

        Regarding claims 1, 2, 6, and 9, Hamalainen discloses a telecommunication

system suitable for transmitting real-time data (speech) and non-real time packet data,

comprising:

a first (a mobile communication system terminal in FIG. 1) and a second

communication station (a base station BTS in FIG. 8c);

a dual mode channel for communication of both the real time (speech signals,

col. 3, line 30) and the non-real time data (col. 3, line 39) from the first to the second

station, wherein the first station comprises a first transceiver which is transmitting both

the real-time and the non-real-time data, the second station comprises a second

transceiver which receiving the real-time and/or the non-real-time data (col. 3, lines 29-

67), the first station further comprises a controller (10) for generating an output data

stream comprising the real-time data (speech signal bits in FIG. 3), the controller also

allocating non-real-time packet data (data, col. 4, lines 25-38) to the output data stream

when the data rate of the real-time data is less than the full capacity of the dual mode

single channel, i.e., when there is no more speech information to transmit, a few frames

of comfort noise frames and a SID frame are sent before transmitting data frames (col.

4, lines 63-65), therefore, the data rate of real time data (speech information) is less

than the full capacity of the dual mode single channel during one frame of the output

stream (Examiner interprets that the one frame of the output stream is a period of a last

speech frame + a few comfort noise frames + a SID frame, i.e., Examiner interprets the

claim limitation as broad as possible, because the one frame of the output stream is not

clearly described in the specification), when there is no more speech information to

transmit, a few frames of comfort noise frames and a SID frame are sent before

transmitting data frames (col. 4, lines 63-65), therefore, the data rate of real time data

(speech information) is less than the full capacity of the dual mode single channel

a first (a mobile communication system terminal in FIG. 1) and a second

communication station (a base station BTS in FIG. 8c);

a dual mode channel for communication of both the real time (speech signals,

col. 3, line 30) and the non-real time data (col. 3, line 39) from the first to the second

station, wherein the first station comprises a first transceiver which is transmitting both

the real-time and the non-real-time data, the second station comprises a second

transceiver which receiving the real-time and/or the non-real-time data (col. 3, lines 29-

67), the first station further comprises a controller (10) for generating an output data

stream comprising the real-time data (speech signal bits in FIG. 3), the controller also

allocating non-real-time packet data (data, col. 4, lines 25-38) to the output data stream

when the data rate of the real-time data is less than the full capacity of the dual mode

single channel, i.e., when there is no more speech information to transmit, comfort noise

and a SID are sent before transmitting data (col. 4, lines 63-65), therefore, the data rate

of real time data (speech information) is less than the full capacity of the dual mode

single channel during one frame of the output stream (Examiner interprets that the one

frame of the output stream is a period of a last speech information in a defined time +

comfort noise + a SID information, i.e., Examiner interprets the claim limitation as broad

as possible, because the one frame of the output stream is not clearly described in the

specification), when there is no more speech information to transmit, comfort noise and

a SID information are sent before transmitting data (col. 4, lines 63-65), therefore, the

data rate of real time data (speech information) is less than the full capacity of the dual

mode single channel during that period (a period of the last speech information +

comfort noise + a SID information), wherein for at least part of output stream, the real time data and non-real time packet in the one frame have a respective non-zero minimum bit rate and combined bit rate for the one frame period is less than a maximum value (a capacity of the channel).

Regarding claims 4 and 7, Hamalainen further discloses that the terminal comprises a buffer (9) for storing the non-real-time packet data for transmission.

Regarding claim 5, Hamalainen further discloses that the invention is applied to a cellular communication system (FIG. 8c) comprising a base station 33 (BTS) as the first transceiver and a mobile station 32 (MS) as the second transceiver.

Regarding claims 15 and 27, refer to the discussion claim 1.

Hamalainen discloses a receiving method (FIG. 2) comprising:

receiving a data stream comprising both real-time data (speech) and non-real time packet data in a single frame (Examiner understands that the single frame in claim 15 is interpreted same as claim 1) from a transmission channel by a mobile communication system terminal in FIG. 2;

demodulating the data stream by a receiver (13);

reading one frame header (SP-ID or D-ID in FIG. 3) to determine which part of the frame contains packet data and which part of the frame contains speech data;

reconstituting the speech and packet data; and

providing the speech data to a speech decoder(3) and packet data output signal at distinct output devices (col. 4, lines 1-10).

Regarding claim 16, refer to the discussion for the claim 1.

Hamalainen discloses a method comprising:

accumulating non-real time packet data in a buffer (9 in FIG. 1);

allocating real-time data (speech) by a controller (10 in FIG. 1) to an output

stream (FIG. 1);

determining when the real-time data does not require the full capacity of a

transmission channel, i.e., a VAD (4 in FIG. 1) indicates the time of interruptions in the

speech data;

allocating the non-real time packet data to the output data stream, when the real-

time data does not require the full capacity of a transmission channel

allocating output data stream to a channel that occupies more than one time slot

(a frame period) in a transmission time frame (a communication session) wherein at

least one frame comprises both real-time data and non-real-time packet data.

Regarding claim 17, refer to the discussion for claims 1 and 16.

Hamalainen discloses a method comprising:

accumulating non-real time packet data in a buffer (9 in FIG. 1);

allocating real-time data (speech) and the non-real time packet data in a variable

proportions to multiple time slots (a plurality of the frame period) within a time frame (a

time period assigned for one communication session in GSM system, col. 1, lines 58-

62) by a controller (10 in FIG. 1) to an output stream (FIG. 1) when the real-time data

does not require the full capacity of a transmission channel; and

transmitting the time frame.

Regarding claims 28 and 30, refer to the discussion for claim 1.

Hamalainen discloses an output data stream or data stream (FIG. 1) including

both real-time data (speech) and non-real time data (data from a buffer 9 in a single

time slot (a frame period), the frame header D-ID in a frame (FIG. 3) indicates both real

time and non-real time data resides in the single time slot, because the packet data can

be allocated in the frame when the speech data is absent in the frame period. The

header SP-ID and D-ID, respectively indicates which part of the time slot has been

allocated to the speech dada or the packet data.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Hamalainen et al (U.S. Patent No. 6,477,176).

Refer to the discussion for claim 1.

However, Hamalainen does not explicitly teach that the data from a computer (6)

is multimedia. It will be apparent to those of skill in the art that the computer could

transmit and receive multimedia such as voice, video image, and data.

Therefore, it would have been obvious to one having ordinary skill in the art to

transmit a first type (video) from the computer, second type (speech) form a microphone

(1) and third type data (data) from the computer.

6.   Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Hamalainen et al (U.S. Patent No. 6,477,176) in view of Gudmundson (U.S. Patent No.

5,341,397).

Refer to the discussion for the claim 1.

However, Hamalainen discloses that the invention is generally implemented in

GSM (TDMA) and thus, does not explicitly teach that the system could be applicable on

a CDMA transmission method. Gudmundson discloses a DTX on a CDMA transmission

system.

Those of skill in the art would have been motivated to apply a CDMA protocol

using a single spreading code to each mobile for the DTX of Hamalainen to take

advantage of using the CDMA such as increasing the system capacity and reducing

interference. Therefore, it would have been obvious to one having ordinary skill in the

art to apply a CDMA protocol to the DTX of Hamalainen.

7.   Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Hamalainen et al (U.S. Patent No. 6,477,176) in view of Feldman (U.S. Patent No.

6,393,000).

Refer to the discussion for claims 2 and 7.

However, Hamalainen differs from the present application in that the controller

receives the timing information form the VAD, while the present application receives it

form the speech coding system.

Feldman teaches a speech coder (10 in FIG. 2) for a method of transmission of

data during absence of speech signal, wherein a VAD is incorporated into the coder.

Those of skill in the art would have been motivated by Feldman to integrate the

VAD (4) of Hamalainen into the speech coding system (speech processing circuit 3) to

reduce a occupying space by combining the two circuitries.

Therefore, it would have been obvious to one having ordinary skill in the art for

the controller of Hamalainen to receive the timing information from the speech

processing circuit integrated with the VAD (speech coding system).

Response to Arguments

8.   Applicant's arguments filed 7/25/2007 have been fully considered but they are

not persuasive.

Regarding claims 1 and 7, Applicant argues (Remarks page 10, lines 13 -14) that

the distinction between the invention and Hamalainen correctly conceded by the last

Office Action is now clearly recited in the rejected claims with the present amendment.

Examiner disagrees. As discussed in the claim rejection, Examiner interprets that

the one frame of the output stream is a period of a last speech information in a defined

time + comfort noise + a SID information, i.e., Examiner interprets the claim limitation as

broad as possible, because the one frame of the output stream is not clearly described

in the specification. Therefore, Hamalainen still teaches all the limitations in the

amended claims.

Regarding claims 2 and 4-6, Applicant argues (Remarks page 11, lines 15-17)

same as claim 1. Therefore, the response is same as claim 1.

Regarding claims 12 and 13, Applicant argues (Remarks page 11, lines 4-7) same as claim 1. Therefore, the response is same as claim 1.

Regarding claim 14, Applicant argues (Remarks page 11, lines 15-16) same as claim 1. Therefore, the response is same as claim 1.

Regarding claims 23 and 24, Applicant argues (Remarks page 12, lines 1-3) same as claim 1. Therefore, the response is same as claim 1.

For the reasons discussed above, Examiner believes that the claim rejection is proper.
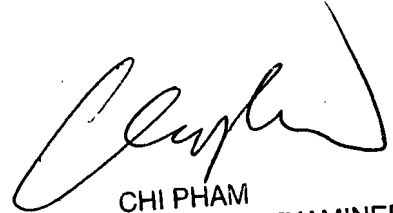
Conclusion

9.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Soon D. Hyun whose telephone number is 571-272-3121. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H. Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

S. Hyun
9/20/2007

CHI PHAM
SUPERVISORY PATENT EXAMINER
9/24/07